

[illegible]

1 M S S K T A S T N S I A Q A R R T V Q Q L R L E A S I E R I K V S K A S A D L M S Y C E E H A R S D
51 P L L M G I P T S E N P F K D K K T C I I L *

Figure 2: cDNA sequence of mGy12 variant 1 (SEQ ID NO:2)

1 CTAGAATTCA GCGGCCGCTG AATTCTAGGC GACGACGGCG AAGAGTGAGT
51 GCCAAGGTTT ATATGGGAAG GACTTTGGGG TGAGCATCTT CTCTATTTCC
101 AGCTGGCTTT TCTGATTTTC AGAAAGAAGA CTCATCAAAG ATGTCCAGCA
151 AGACGGCAAG CACCAACAGC ATAGCCCAAG CCAGGAGAAC TGTGCAGCAG
201 CTGAGATTGG AAGCCTCCAT CGAAAGAATA AAGGTCTCAA AAGCATCAGC
251 AGACCTGATG TCATACTGTG AGGAGCATGC CCGGAGCGAC CCCCTGCTGA
301 TGGGCATACC GACCTCAGAA AACCCGTTCA AGGATAAGAA GACCTGCATC
351 ATCTTATAGT GGACCAGGAA GCGCCCCTTG CCTCTTAACG CAAACCACAG
401 CAGCAACCTG AAGGGATTCC TTCAGCTTAC CTGGTAACCA CAGCTAGTAA
451 CTAAACACC CTTCTCTCGG AATAATAGAC CCTGAAGTCT CTCTTTTTCA
501 AGTTGTCCTT TCTTCACCCT TTACTGATTT AATACAGAAT AACAACTTTA
551 TTTTCTATTT GATAACTATG GTATCATATT GGGTTACTGT ATAAGGAAAA
601 TGGCAGGGGA GTTGTGGGAA GCTTGTCTTT ACAAATATA ATTGATTAAG
651 ATATGTCAAG ACCTACATTG TCTAAGCACC GGCAAATTAA AATGTCGAGA
701 ATCACTTCAG TCAAAAACCT TTATATTCTG TTCTTAATAA TGTTTGTGCC
751 AACCTATATC CCATGTAAGG GATCTGGGGA GGAGGCATGT GTCTACAACC
801 ATACCTTTTT GCACTATGGG CACTAACCAC CCTGAACTT CCTGCGGTAG
851 CTCCCTCCCT TCAGAGTTAC ATCATTATCC TGACTCTGTG TAGGTAAATT
901 TCCGTGAAAT TTTTGTACAA AAAAAAGGTA ATGAAAGAAC GTTGCAAAGA
951 TCATCTGCAT TATAATGAGT TGATGCTGTT CTCACTCCTC TCTTGGAATT
1001 GTGCTGGCCC CTTAGTCTAC AATAAACTGT GCCAATTAAA AACCTAAGGC
1051 TAAAACTGAA AGCCCTTTGA TGGGGTCTTA ACTCATATCA GTCATTTGGG
1101 CTTCTCTGAT CCTGAGGCTA AGAAAGGGGA AGAGACCCTC AGGAGGCAGC
1151 TTCCACTCCA GGGCTCTTGA TCTCTGCTGG ATTGGGGGTG GCCACCTCAG
1201 AAACCTCCAC CCTCATGACT GGAATGGAAG AGGGGACCGA GAGCCTCACA

1251 ATCTCGGAGA GGGAGGAGAA ATTCTTAAAA ACAGCTGCTC TCCTGCGCCC
1301 AGCTTCACAG GCAGCCCTGC CCCTTTCTCC TCACCAGCAT GGTACCTGCC
1351 CTTACTGCTA GAGCAGCTGC TTGTAGAGGG ACATTCCCTC CTTCCCAGTT
1401 TTAAGTGGTG GACCACAGTG GGGGGAAAAA CATTCAAGCG ATATAAAGAC
1451 ACTTGGGCTC TTTGCAGATG CCTATACTTC CAACACTACC ATGTCCACAA
1501 ACCACCCTGG GGGAGGGCCC TTCCAAAGGG AGGCTTGCTA GTTTCAGCGT
1551 CTAGCAGTTG GGTCCCTCACT TTTACTCCAA TTGTGAAAAT AGCCACGTA
1601 CCCTCGCAGT GTCCAGTAGG GATCCCAGAG GCACATAACC AAGAAAGGAT
1651 TTTGACTTTG TCACAGTGAC TATTTAAAAT AATCTATTCG AAGTCCAAAC
1701 CAAACACAAA GCCTGTGATA TTTTAGGTTA TTAAGGTAAC TGCTAATGAA
1751 GGATTTTAAA AAGTGTCTCT AAAAAGGACT TAGCCCCGGG AGTTGTTTAT
1801 AAAATTTCCC CCACTTGTAT ACAGTGTGCA CTAAAAGAAA ATGTATTTTA
1851 ATATCTAATG CCTGGGCTCT GAGCGTCATG CTTCTTGGTG GTAAACATGC
1901 AGTCCTGTTC CTAAGTGA CTAGAGGCATC AGAATTTCTC CACGTTACCC
1951 ATCTGCTTGG CACTCGGAAC TGAGCGTGTG AAATCCATAG CGCTGCCCAC
2001 AACCTGTTCT CACTGCTTAG CTCCCAGCTG GATTAAAGAC ACCTGCTCAG
2051 GCGGGAGAGA GAGAGAGAGA GCGAGCTTTT ACCTTGAAA AGGTAAAGAT
2101 GGAAATGTAC ACCAAAAAAG ACAATTTTTA CATTTAATGG AACATTCTTT
2151 TTTTTTACAA GTATATTTTT CTAAGTATAG TTTCAGAAC CTAATCTTAT
2201 ATCACTCTA ATCTTAAACA TGTTTCTTTA AATATTTATA AGGCAGTTTA
2251 TTACAGAATA TTTTCATGCA ATCATGTGCA CATTATTGGT AGCAAACATA
2301 GTATATCCTT TAGTACTTTA GCATATTTTT GTTAAAATAC TTTTAATGGT
2351 AAGAAATGAA CTTGAGGTCC CAGGAGGTTT TGTTGCCTTT TCATTGATTA
2401 GAGACAATAA ATATCTTGTA ACTTCCTAAC CAGATCTGAG CTGTGCTCAC
2451 AATAATAATA ATGAAATCAG ATTCTTTGAT GCTGGACTCA GGAGGGAAAT

2501 CATTAGCCAA CTGTTGACTT ACTTATAGCT AGATGTCTAT GTGAGAAAGT
 2551 ATAATATATA TATATACACA TATATATGAC ATGTAAGAGT CACTTTTATT
 2601 TATCTGTCTT TGTTCACCTA TGAAGCCGGT AACTGCAGCA GTATGTTGGT
 2651 GATGTCATGA TGCACAGAAG TCCCATGTGG AGTGTTTTTC CCACACTGAC
 2701 AACTTGGCCT CCTTTCTGTG TGTTCAGTCT GTTGTCTGAA CTAACACTCC
 2751 CGCGAGCACT ATACTCTTTA TACTCTGATC CCCCTAGTTC ATCTTAAATT
 2801 TGTCTGTGGC CCTGGCAAGA TAGCGTACAC AAGATTCCAT GACTCCAGAG
 2851 CATCTTGAAG AAACATACAT ATTTTGAAAG AGGGGAAATG TAGCAGATAG
 2901 TTCACAAGCT GCGGGTTGTA GCTAAATATT CCATTTCTTT GAAATCATGT
 2951 TTCTAAATTC TTTACCATCA GAAAGAAAAG GAGTGTGATA CACTTTCAAG
 3001 GGAAGGCTTG GTCTGCGTTT TCTGTGTTTG GATTATTTTT ATACTTTGCT
 3051 GATCTTTAAG CTATCCATGG GGGAAATTTT ATACCAACGA GTTAATAATT
 3101 CTCATTCATC GTTTACACAA TGTAACATGT GTCATACTGG GGCCAGCGAG
 3151 ATGGCTCAGT AGGTAAAGGT GCTTGATGCT AAGCCCGGCA GCCTGTGTTT
 3201 CATCTACAGG ATGCACAACA TAAAAGAAAA GATCTGATTC CCACAGGTTC
 3251 TCTTCTGACC TACACACACA CACACTAAAA TAACATTTAA AAATATGTGC
 3301 CAAATTATAT TTGTTCTGGT GCCACCTTCC ACCAGCTTAC CACTACGGTA
 3351 GAACTGTCAA ATTCATCTCC CTGAATTTGT CTTAAAGGGG TGTCCATGCA
 3401 CAGGCCCAAG AGTCACCTCC AATGAAATAA ATGTAATACT GAAGTATGCC
 3451 ATGATGTTTG TTGTTTTCTT TCATCGTAAG CCTGTAAGCA GGAAAAATAC
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 3601 CTTCCCTTGT TGTCACAAGG GAATAGAAGC AGAAGAAGCT GAGAGCCTCC
 3651 CTATTCCCAG ATGCCCTGGT GGAATGACCT GCCTCTCTGC CGTTTCTGCC
 3701 AACGTGTTGG TGCTATAAGC TGCTTCAAAT ACCAGTTTGT CTGTAGTGTG
 3751 TACTCACCTA ATCACTTGTT ATCCAGTGCC TGTTCTAGGT TTATGGACTT

3801	AACTATTTCT	GTGATGTTTC	ATTTTtagcc	ATGTAACTC	CTAACACATA
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3901	TATTTGATAA	TATTCTTCGG	CTGTCCATCC	AGCATCTTAA	TCACTTTTAA
3951	ACTGTGATTG	TTATTTGCAA	CTCTGTTCTT	TGGAAAGAAT	AAAAGCATTt
4001	TTTTTCACTT	GCTAACATGC	TCACAAATGT	GAGAGAAGAG	TCATTAAAAG
4051	CTTTACTTAC	TGGGTCAGTG	CGTCATTGAC	TCCTTTCTGT	GTTTTGCCCA
4101	ATAAATTAAT	AAAAGACCAA	AAAAAAAAAA	AAAAAAAAAA	AAAAAA

[illegible]

Figure 3: cDNA sequence of mGy12 variant 2 (SEQ ID NO:3)

1 GCAGCGGCGG CGGCGGCGAC GACGGCGAAG AGTTCATATG GGAAGGACTT
51 TGGGGTGAGC ATCTTCTCTA TTTCCAGCTG GCTTTTCTGA TTCACCCAC
101 CATTTAAAC CTGGAGGCAC TGGGCCACAC AAAGCCTTGC TGATTTTCAG
151 AAAGAAGACT CATCAAAGAT GTCCAGCAAG ACGGCAAGCA CCAACAGCAT
201 AGCCCAAGCC AGGAGAACTG TGCAGCAGCT GAGATTGGAA GCCTCCATCG
251 AAAGAATAAA GGTCTCAAAA GCATCAGCAG ACCTGATGTC ATACTGTGAG
301 GAGCATGCCC GGAGCGACCC CCTGCTGATG GGCATACCGA CCTCAGAAAA
351 CCCGTTCAAG GATAAGAAGA CCTGCATCAT CTTATAGTGG ACCAGGAAGC
401 GCCCCTTGCC TCTTAACGCA AACCACAGCA GCAACCTGAA GGGATTTCCTT
451 CAGCTTACCT GGTAACCACA GCTAGTAACT AAAACACCCT TCTCTCGGAA
501 TAATAGACCC TGAAGTCTCT CTTTTTCAAG TTGTCCTTTC TTCACCCTTT
551 ACTGATTTAA TACAGAATAA CAATCTTATT TTCTATTGTA TAACTATGGT
601 ATCATATTGG GTTACTGTAT AAGGAAAATG GCAGGGGAGT TGTGGGAAGC
651 TTGTCTTTAC AAAATATAAT TGATTAAGAT ATGTCAAGAC CTACATTGTC
701 TAAGCACCGG CAAATTAAAA TGTCGAGAAT CACTTCAGTC AAAAACCTTT
751 ATATTCTGTT CTTAATAATG TTTGTGCCAA CCTATATCCC ATGTAAGGGA
801 TCTGGGGAGG AGGCATGTGT CTACAACCAT ACCTTTTTGC ACTATGGGCA
851 CTAACCACCC TGAAACTTCC TGCGGTAGCT CCCTCCCTTC AGAGTTACAT
901 CATTATCCTG ACTCTGTGTA GGTAAATTTT CGTGAAATTT TTGTACAAAA
951 AAAAGGTAAT GAAAGAACGT TGCAAAGATC ATCTGCATTA TAATGAGTTG
1001 ATGCTGTTCT CACTCCTCTC TTGGAATTGT GCTGGCCCCT TAGTCTACAA
1051 TAAACTGTGC CAATTAAAAA CCTAAGGCTA AAAGTGAAG CCCTTTGATG
1101 GGGTCTTAAC TCATATCAGT CATTGGGGCT TCTCTGATCC TGAGGCTAAG
1151 AAAGGGGAAG AGACCCTCAG GAGGCAGCTT CCACTCCAGG GCTCTTGATC

1201 TCTGCTGGAT TGGGGGTGGC CACCTCAGAA ACTTCCACCC TCATGACTGG
1251 AATGGAAGAG GGGACCGAGA GCCTCACAAT CTCGGAGAGG GAGGAGAAAT
1301 TCTTAAAAAC AGCTGCTCTC CTGCGCCCAG CTTACAGGC AGCCCTGCCC
1351 CTTTCTCCTC ACCAGCATGG TACCTGCCCT TACTGCTAGA GCAGCTGCTT
1401 GTAGAGGGAC ATTCCCTCCT TCCCAGTTTT AACTGGTGGA CCACAGTGGG
1451 GGGAAAAACA TTCAAGCGAT ATAAAGACAC TTGGGCTCTT TGCAGATGCC
1501 TATACTTCCA AACTACCAT GTCCACAAAC CACCCTGGGG GAGGGCCCTT
1551 CCAAAGGGAG GCTTGCTAGT TTCAGCGTCT AGCAGTTGGG TCCTCACTTT
1601 TACTCCAATT GTGAAAATAG CCCACGTACC CTCGCAGTGT CCAGTAGGGA
1651 TCCCAGAGGC ACATAACCAA GAAAGGATTT TGACTTTGTC ACAGTACTA
1701 TTTAAAATAA TCTATTCGAA GTCCAAACCA AACACAAAGC CTGTGATATT
1751 TTAGGTTATT AAGGTAAGT CTAATGAAGG ATTTTAAAAA GTGTCCTCAA
1801 AAAGGACTTA GCCCCGGGAG TTGTTTATAA AATTTCCCCC ACTTGTATAC
1851 AGTGTGCACT AAAAGAAAAT GTATTTTAAT ATCTAATGCC TGGGCTCTGA
1901 GCGTCATGCT TCTTGGTGGT AAACATGCAG TCCTGTTTCT AAGTGAAGCA
1951 GAGGCATCAG AATTTCTCCA CGTTACCCAT CTGCTTGGCA CTCGGAAGTG
2001 AGCGTGTGAA ATCCATAGCG CTGCCCACAA CCTGTTCTCA CTGCTTAGCT
2051 CCCAGCTGGA TTAAAGACAC CTGCTCAGGC GGGAGAGAGA GAGAGAGAGC
2101 GAGCTTTTAC CTTGGAAAAG GTAAAGATGG AAATGTACAC CAAAAAGAC
2151 AATTTTTTACA TTTAATGGAA CATTCTTTTT TTTTACAAGT ATATTTTTCT
2201 ACTGATAGTT TCAGAACT AATCTTATAT TCACTCTAAT CTAAACATG
2251 TTTCTTTAAA TATTTATAAG GCAGTTTATT ACAGAATATT TTCATGCAAT
2301 CATGTGCACA TTATTGGTAG CAAACATAGT ATATCCTTTA GTACTTTAGC
2351 ATATTTTTGT TAAATACTT TTAATGGTAA GAAATGAACT TGAGGTCCCA
2401 GGAGGTTTTG TTGCCTTTTC ATTGATTAGA GACAATAAAT ATCTTGTAAC

2451 TTCCTAACCA GATCTGAGCT GTGCTCACAA TAATAATAAT GAAATCAGAT
 2501 TCTTTGATGC TGGACTCAGG AGGGAAATCA TTAGCCAACT GTTGACTIONAC
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 2651 AAGCCGGTAA CTGCAGCAGT ATGTTGGTGA TGTCATGATG CACAGAAGTC
 2701 CCATGTGGAG TGTTTTTCCC AACTGACAA CTTGGCCTCC TTTCTGTGTG
 2751 TTCAGTCTGT TGTCTGAACT AACACTCCCG CGAGCACTAT ACTCTTTATA
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 2851 GCGTACACAA GATTCCATGA CTCCAGAGCA TCTTGAAGAA ACATACATAT
 2901 TTTGAAAGAG GGGAAATGTA GCAGATAGTT CACAAGCTGC GGGTTGTAGC
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 3001 AAGAAAAGGA GTGTCATACA CTTTCAAGGG AAGGCTTGGT CTGCGTTTTTC
 3051 TGTGTTTGA TTATTTTTAT ACTTTGCTGA TCTTTAAGCT ATCCATGGGG
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 3301 CACTAAAATA ACATTTAAAA ATATGTGCCA AATTATATTT GTTCGGGTGC
 3351 CACCTTCCAC CAGCTTACCA CTACGGTAGA ACTGTCAAAT TCATCTCCCT
 3401 GAATTTGTCT TAAAGGGGTG TCCATGCACA GGCCCAAGAG TCACCTCCAA
 3451 TGAAATAAAT GTAATACTGA AGTATGCCAT GATGTTTGTT GTTTTCTTTC
 3501 ATCGTAAGCC TGTAAGCAGG AAAAATACGT CAAATCAGAT AGAATAGAGC
 3551 ATTTACCAGT GGTCGATGGC CTGGTCAGTC CTGTGCCGGG TGACTIONAGGA
 3601 CCAGGCACGT CAGCTCTCTG AGCCTCCCCT TCCCTTGTTG TCACAAGGGA
 3651 ATAGAAGCAG AAGAAGCTGA GAGCCTCCCT ATTCCCAGAT GCCCTGGTGG
 3701 AATGACCTGC CTCTCTGCCG TTTCTGCCAA CGTGTGGGTG CTATAAGCTG

3751 CTTCAAATAC CAGTTTGTCT GTAGTGTGTA CTCACCTAAT CACTTGTTAT
3801 CCAGTGCCTG TTCTAGGTTT ATGGACTTAA CTATTTCTGT GATGTTTCAT
3851 TTTTAGCCAT GTTAACTCCT AACACATATT CTCTTATGTC TCAGTAAAGT
3901 TTCATTTGAT AAGTTGTTGA GATTCTGTGA TTTGATAATA TTCTTCGGCT
3951 GTCCATCCAG CATCTTAATC ACTTTAAAAC TGTGATTGTT ATTTGCAACT
4001 CTGTTCTTTG GAAAGAATAA AAGCATTTTT TTCACTTGC TAACATGCTC
4051 ACAAATGTGA GAGAAGAGTC ATTAAAAGCT TTACTTACTG GGTCAGTGCG
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4151 AAAAAAAAAA AAAAAAAAAA AAAAA

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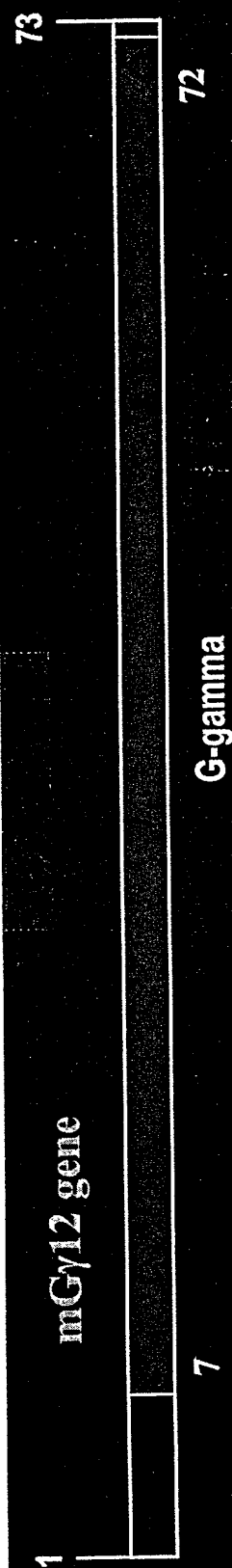
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FIGURE 5